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10/681,748	10/09/2003	Frederick A. Parker	3357-Z	8134

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EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/681,748  
Filing Date: October 09, 2003  
Appellant(s): PARKER, FREDERICK A.

**MAILED**  
**MAY 14 2007**  
**GROUP 3700**

Jim Zegeer  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed November 13, 2006 appealing from the  
Office action mailed May 9, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,152,162	BALAZY	11-2000
2001/0032668	DOTY	10-2001
6,564,824	LOWERY	05-2003

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Balazy et al. (US 6,152,162).**

Balazy et al. discloses (See Fig. 6, for example) a fluid flow control system (400) comprising a flow path coupling a source of fluid (418); a valve (420) in said flow path, a flow restrictor (428) in said flow path, a pressure transducer (414, 416) connected across said flow restrictor for producing a control signal proportional to pressure differential there across and a controller (405) connected to receive said control signal and continuously adjust the valve (i.e. pulse said valve at a frequency) to obtain a preset target value of pressure differential across the resistor.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balazy et al. (US 6,152,162) as applied to claims 1 and 9 above, and further in view of Doty et al. (US 2001/0032668 A1).**

The patent to Balazy et al. discloses the claimed invention with the exception of explicitly disclosing a system of mixing two or more fluids comprising in combination the fluid flow control system recited in claim 1, coupled to a mixer that is also coupled to a source of second fluid.

Doty et al. discloses (Fig. 1, for example) a system of mixing two or more fluids comprising sources (110, 120) of first and second fluids, a controller (200) and a mixer (130) for the purpose of obtaining a controlled mixture of the fluids.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have coupled the control system disclosed in Balazy et al. to the mixing arrangement disclosed in Doty et al. for the purpose of providing a controlled mixture of fluids. It is noted that the control system of Balazy et al. is equivalent to the combination of the controller (200) and the flow controller (160) in Doty et al..

**Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balazy et al. (US 6,152,162) as applied to claims 1 and 11 above, and further in view of Lowery et al. (US 6,564,824).**

The patent to Balazy et al. discloses the claimed invention with the exception of explicitly disclosing means for inputting a flow-modifying signal to the controller.

Lowery et al. discloses (Col. 9, lines 30 – 33) means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in Balazy et al. means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature, for the purpose of obtaining a more accurate measure of the flow.

**Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Balazy et al. (US 6,152,162) and Doty et al. as applied to claims 2 and 12 above, and further in view of Lowery et al. (US 6,564,824).**

The combination of Balazy et al. and Doty et al. discloses the claimed invention with the exception of explicitly disclosing means for inputting a flow-modifying signal to the controller.

Lowery et al. discloses (Col. 9, lines 30 – 33) means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the combination of Balazy et al. and Doty et al. means for inputting a flow modifying signal to the controller to account for changes to the relationship between flow and pressure differential that could arise for example, from changes in operating temperature, for the purpose of obtaining a more accurate measure of the flow.

**(10) Response to Argument**

Applicant's argument that Balazy does not disclose, or even suggest, a valve in the flow path that controls the flow by pulsating the valve at a controlled frequency to obtain a preset target Pressure is unpersuasive in that the claim does not recite a "pulsating the valve at a controlled frequency". Also, the limitation in claim 1 reads, "a controller connected to receive said signal and pulse said valve at a frequency to obtain a preset target value of Pressure". Clearly the recitation "pulse said valve at a frequency" is a functional limitation and the valve in Balazy et al. is capable of meeting this functional limitation in that it is moved to achieve a target pressure. In Col. 9, lines 56 – 60, Balazy et al. clearly states that the controller (405) "continuously adjusts (as required)" valve (420) "to insure that the actual flow through the system precisely corresponds to that desired ". Thus Balazy et al. is capable of pulsing the valve at a frequency as claimed. Applicant's argument that Balazy et al. teaches away from a control valve is unpersuasive. It is noted that Balazy et al. discloses (Col. 5, line 62 – Col. 6, line 13) an alternative arrangement wherein an adjustable flow control valve is explicitly stated to be an example of a pressure flow regulator (Col. 5, line 65). Furthermore, the "pressure regulator" In Balazy et al. is used to control flow to a desired flow rate and such regulates flow as well and thus functions as a valve. Balazy et al.'s statement, quoted by the applicant, concerning the use of a pressure regulator rather than a control valve is being viewed simply as a statement reflecting the use of an alternate means for achieving the desired flow control. Balazy et al. does not explicitly state that a flow

Art Unit: 3753

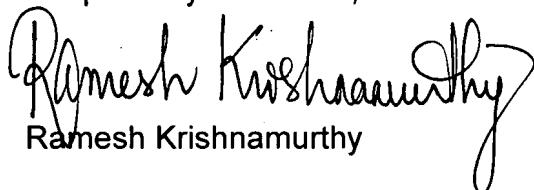
control valve cannot be used for the purpose of flow regulation as set forth in their invention.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Ramesh Krishnamurthy

Primary Examiner

Conferees:



Eric Keasel

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Kevin Shaver

Supervisory Patent Examiner